

WVDEP – Division of Water Resources

Ground Water Program

GROUNDWATER PROTECTION PLAN GUIDANCE DOCUMENT

INTRODUCTION

47CSR58, Section 4.11. requires that “Each industrial establishment shall have a comprehensive groundwater protection plan (GPP).” The term “Industrial Establishment” includes all commercial, state, or municipal facilities that have any of the following:

1. Outside Material Storage or Disposal Areas
2. Loading and Unloading Areas at Distribution and Bulk Facilities
3. Impoundments, Ponds, or Lagoons
4. Pipelines, Ditches, Pumps, or Drum Storage
5. Sumps or Tanks, including septic systems

Facilities which also implement a Storm Water Pollution Prevention Plan (SWPPP) or Spill Prevention, Control & Countermeasures (SPCC) plan may combine the GPP with them as long as all elements required by the 47CSR58 are included.

Section 12. requires all industrial establishments to have a completed and implemented GPP.

Section 4.12.b. requires new facilities to have a completed GPP prior to construction.

Section 4.12.c. requires the GPP to be available on site at all times. It also states that GPPs will be required to be submitted and reviewed as part of NPDES Permit application or renewal, but that the director may review the GPP at any time.

Section 4.12.d. states that “The director may require modification to GPPs to assure adequate protection of groundwater. Further the director may, during review of a GPP require such other information as he reasonably needs to evaluate the plan.”

A Small Business GPP and sample GPPs for larger facilities are available from the Division of Water Resources, Groundwater Program at 304/558-2108, FAX 304/558-2780, TDD 304/558-2751, or rshaver@mail.dep.state.wv.us.

GPP ELEMENTS

SECTION 4.11.a.

“An inventory of all operations that ‘*may reasonably be expected to*’ contaminate the groundwater resources with an indication of the potential for soil and groundwater contamination from these operations.”

The operator should determine which of the operations and materials present at the facility may reasonably be expected to contaminate groundwater. For example, fuel or solvents in above ground storage tanks or drums have a high potential to contaminate groundwater and so should be included in the inventory. An example of a storage unit which would NOT be reasonably expected to contaminate groundwater would be a Propane tank. A compressed gas tank like this should not be included in the inventory.

A site plan showing all units in the inventory should be included.

SECTION 4.11.b.

“A description of procedures designed to protect groundwater from the identified potential contamination sources, with specific attention given to:”...

4.11.b.1. Manufacturing facilities

4.11.b.2. Materials handling

4.11.b.3. Equipment cleaning

4.11.b.4. Construction and Maintenance activities

4.11.b.5. Pipelines carrying contaminants

4.11.b.6. Sumps and tanks containing contaminants

List procedures including operating practices and physical installations which prevent groundwater contamination for each of these categories. Some may not be present at every facility.

SECTION 4.11.c.

“A list of procedures to be employed in the design of any new equipment/operations.”

New operations must be designed, constructed, and operated to protect groundwater. This may include improvements on existing protection measures. Make a statement in this section about how groundwater protection will be included in any new equipment or operations. Specific personnel or safety/environmental committees should be mentioned.

Site Selection Criteria (47CSR58, Section 4.10.) are important considerations when a facility intends to construct new or expand existing operations. Adequate design of these operations must be considered in the GPP when making changes in areas of karst, wetlands, faults, subsidence, delineated wellhead protection areas as determined by the Bureau for Public Health, or other areas determined by the Director to be vulnerable based upon geologic or hydrogeologic information.

If an existing or planned facility is located in or near one or more of these vulnerable areas, this must be addressed in the GPP. The facility should revise their existing GPP to address any newly delineated areas or other vulnerable area upon notification by the Bureau for Public Health or the Director of WVDEP.

SECTION 4.11.d.

“A summary of all activities carried out under other regulatory programs that have relevance to groundwater protection...”

List any other permits, required spill prevention and response plans, registrations (ex., UST registration), certifications, or other approvals, and regulatory agencies who regulate groundwater protection measures at the facility.

Examples include:

- ▽ NPDES
- ▽ NPDES – Storm Water
- ▽ WVDEP – OWM – Solid Waste Facility Permit
- ▽ WVDEP – OWM – RCRA (Hazardous Waste TSD or transporter)
- ▽ WVDEP – OWM – UST

- ∇ CERCLA – Superfund
- ∇ WV Voluntary Remediation – (Brownfields)
- ∇ FIFRA – Federal Insecticide, Fungicide, and Rodenticide Act
- ∇ Well Head Protection Program (WHPP)
- ∇ Underground Injection Control (UIC)
- ∇ Toxic Substances Control Act – (TSCA)
- ∇ Best Management Plans
- ∇ Management of Used Oil

SECTION 4.11.e.

“A discussion of all available information reasonably available to the facility/activity regarding existing groundwater quality at, or which may be affected by the site.”

This section should include any groundwater analyses for the site. Attach a summary of data for the last year if sampling has been conducted for more than a year. Sometimes contamination which originates on one site migrates to a second site. This section should contain any other information which is readily available such as soil type, geologic formation, depth to ground water, or the results of any percolation tests for a septic system conducted by the county health department. Drinking water well, spring analyses, seeps should also be included if they have been sampled. These well locations or other sampling points should be marked on the site map.

Monitoring wells and ground water sampling may be required by the Director for assessment of the potential for or existence of groundwater contamination, but are not automatically required for every GPP. Many sites have no groundwater monitoring data from their site and should state that in this section.

SECTION 4.11.f.

“A clarification that no wastes be used for deicing, fills, etc., unless provided for in existing rule.”

The GPP must have a statement that waste materials will not be used for deicing, fill, or any other use, unless that use is provided for in some other regulation or permit. A temporary construction demolition permit (D2) might allow waste to be used for fill. A power plant permit might allow the use of non-hazardous bottom or fly ash for snow and ice control on access roads and parking areas. Any use of wastes for deicing, fill, or similar use should be detailed along with the permit, regulation, or use authorization.

SECTION 4.11.g.

“Provisions for all employees to be instructed and trained on their responsibility to ensure groundwater protection. Job procedures shall provide direction on how to prevent groundwater contamination.”

Summarize instruction and training given to all employees concerning groundwater protection, including frequency of training. Job procedures should include a description of groundwater protection measures used for a specific unit or activity. Besides training on specific prevention measures and cleanup procedures, the main emphasis should be that groundwater is a resource which, by law, must be protected. Also included in training should be recognizing potential groundwater contaminants, and spill notification and documentation.

SECTION 4.11.h.

“The GPP shall include provisions for quarterly inspections to ensure that all elements and equipment of the site’s groundwater protection program are in place, properly functioning and appropriately managed.”

A minimum of quarterly inspections of the GPP elements by facility personnel is required. Although not strictly required by the rule, documentation of these inspections can only help with DEP inspections or to demonstrate the facility’s efforts to protect groundwater. The GPP should include a description of inspection procedures and how control structures and devices are managed. Include a copy of the facility’s inspection form if one is used.

SECTION 4.12.

All industrial establishments were to have a completed and implemented GPP by June 1, 1995 (one year after the effective date of 47CSR58). New facilities are required to have a completed GPP prior to construction. Pre-construction GPPs will be reviewed by the Groundwater Program at Division of Water Resources.

The GPP must be available on site at all times for review by DEP personnel. The GPP will be required to be submitted as part of an NPDES application, renewal, or modification.

The Director may require modification of a GPP to assure adequate protection of groundwater. If a facility does not have adequate groundwater protection practices in place they may submit a compliance schedule for implementation of necessary practices along with their permit renewal. If approved, this compliance schedule would allow them time to implement the necessary practices.

ENFORCEMENT

Failure to have a completed and implemented GPP is a violation.

Failure to follow any practice set forth in a GPP is a violation of the Groundwater Protection Rule.

Complying with a GPP does not relieve the facility of any obligation to comply with any other federal, state, or local rule, regulation, or statute.